UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,322	11/27/2000	Vinay Deo	MS1-685US	5892

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EXAMINER
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ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/725,322	DEO ET AL.
	Examiner	Art Unit
	Harold E. Dodds, Jr.	2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _27 November 2000_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-45_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-45_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _27 November 2000_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _2_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

U.S. Patent and Trademark Office
PTOL-326 (Rev. 04-01)   **Office Action Summary**   Part of Paper No. 5

DETAILED ACTION

Claim Objections

1.   Claim 7 is objected to under 37 CFR 1.75 as being a substantial duplicate

of claim 6. When two claims in an application are duplicates or else are so close in

content that they both cover the same thing, despite a slight difference in wording, it is

proper after allowing one claim to object to the other as being a substantial duplicate of

the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claims 32, 38, 42, and 45 are rejected under 35 U.S.C. 112, second paragraph,

as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention. In claim 32, the preamble states "A

computer-readable medium storing computer-executable instructions that, when

executed on a processor". Claim 32 depends on independent claim 29, which is a

method claim. In claim 38, the preamble states "A computer-readable medium storing

computer-executable instructions that, when executed on a processor". Claim 38

depends on claim 33, which is a method claim. In claim 42, the preamble states "A

computer-readable medium storing computer-executable instructions that, when

executed on a processor". Claim 42 depends on claim 39, which is a method claim. In

claim 45, the preamble states "A computer-readable medium storing computer-

executable instructions that, when executed on a processor". Claim 45 depends on

claim 43, which is a method claim.

3.   Where applicant acts as his or her own lexicographer to specifically define

a term of a claim contrary to its ordinary meaning, the written description must clearly

redefine the claim term and set forth the uncommon definition so as to put one

reasonably skilled in the art on notice that the applicant intended to so redefine that

claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52

USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "exposes" in claims 2, 20, 30, and 41 is

used by the claim to mean "contains", while the accepted meaning is "shows." The term

is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this Office

action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Tobita

et al. (U.S. Patent No. 6,421,279).

Tobita anticipated independent claim 1 by the following:

"...a processor..." at col. 47, lines 26-29.

"...volatile memory and nonvolatile memory operatively coupled to the processor..." at

col. 4, lines 24-25 and col. 47, lines 26-29.

"...and a file system to manage access to one or more data files..." at col. 4, lines 58-60

and col. 31, lines 32-54.

"...stored in the volatile memory and in the nonvolatile memory..." at col. 45, lines 66-67

and col. 46, lines 1-8.

6.   As per claim 8, the "...at least one application stored in the nonvolatile

memory...," is taught by Tobita at col. 6, lines 52-55, col. 45, lines 66-67, and col. 46,

lines 1-8,

the "...and executable on the processor...,"is taught by Tobita at col. 19, lines 65-67 and

col. 20, lines 1-3,

and the "...to request access to the one or more data files...," is taught by Tobita at col.

7, lines 30-34.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

8.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Tobita as applied to claim 1 above, and further in view of Li (U.S. Patent No. 6,519,594).

As per claim 2, the "...that are used by an application to request the one or more

data files...," is taught by Tobita at col. 6, lines 52-55 and col. 7, lines 30-34,

the "...stored in the volatile memory and the nonvolatile memory....," is taught by Tobita

at col. 45, lines 66-67 and col. 46, lines 1-8,

but the "...file system exposes a set of application program interfaces...," is not taught by

Tobita.

However, Li teaches the use of file systems and application program interfaces

as follows:

```
"...Within the system architecture 120 of FIG. 3, the API layer
125 or application program interface is shown as the top layer.
The API 125 is associated with a JVM 130. Generally, only one
application is resident for a particular JVM 130.  The device
module 135 includes a file system which can use a mini disk, a
hard disk, flash ROM, a CD-ROM and/or a tape storage device..."
at col. 6, lines 31-37.
```

It would have been obvious to one of ordinary skill at the time of the invention to

combine Li with Tobita since both Tobita and Li teach the use of computers, the use of

volatile memory, the use of nonvolatile memory, the use of tables, the use of files, the

use of file systems, the use of applications, and the use of functions. Tobita provides a

processor with both volatile and nonvolatile memory and a file system to manage the

access of data and Li provides the application program interface and functions with

parameters.

9.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Tobita and Li as applied to claim 2 above, and further in view of Chen (U.S. Patent No.

6,542,955).

As per claim 3, the "...individual functions defined in the set of application

program interfaces...," is taught by Li at col. 10, lines 31-39 and col. 6, lines 31-33,

the "...include a parameter...," is taught by Li at col. 14, lines 4-6,

but the "...identifying whether an associated data file is stored in the volatile memory or

the nonvolatile memory...," is not taught by either Tobita or Li.

However, Chen teaches the use of a flag to distinguish between data stored in

volatile or non-volatile memory as follows:

```
"...The state of the NVMEN flag 242 determines whether a data
memory access is into the non-volatile memory 220' or volatile
memory (e.g., into of the internal data SRAM 230, SFR 240 or
external data SRAM 212)..." at col. 6, lines 16-19.
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It would have been obvious to one of ordinary skill at the time of the invention to

combine Chen with Tobita and Li since Tobita, Li, and Chen teach the use of

computers, the use of volatile memory, the use of nonvolatile memory, and the use of

functions and Li and Chen teach the use of networks. Tobita provides a processor with

both volatile and nonvolatile memory and a file system to manage the access of data, Li

provides the application program interface and functions with parameters, and Chen

provides a flag distinguishing whether data is stored in volatile or non-volatile memory.

10.   Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Tobita as applied to claim 1 above, and further in view of Chen (U.S. Patent No.

6,542,955).

As per claim 4, the "...file system comprises a memory region directory...,"

is taught by Tobita at col. 4, lines 58-60 and col. 38, lines 19-38,

the "...are stored in the volatile memory or in the nonvolatile memory...," is taught by

Tobita at col. 45, lines 66-67 and col. 46, lines 1-8,

but the "...to identify whether the one or more data files...," is not taught by Tobita.

However, Chen teaches identifying whether data is in volatile or non-volatile

memory as follows:

```
"...The state of the NVMEN flag 242 determines whether a data
memory access is into the non-volatile memory 220' or volatile
memory (e.g., into of the internal data SRAM 230, SFR 240 or
external data SRAM 212)..." at col. 6, lines 16-19.
```

It would have been obvious to one of ordinary skill at the time of the invention to

combine Chen with Tobita since Tobita and Chen teach the use of computers, the use

of volatile memory, the use of nonvolatile memory, the use of registers, and the use of

functions. Tobita provides a processor with both volatile and nonvolatile memory and a

file system to manage the access of data and Chen provides a flag distinguishing

whether data is stored in volatile or non-volatile memory.

11.   As per claim 5, the "...a memory region directory...," is taught by Tobita at

col. 38, lines 19-38,

the "...to identify whether the one or more data files are stored in the volatile memory or

in the nonvolatile memory...," is taught by Chen at col. 6, lines 16-19,

and the "...and one or more file location specifiers to specify a physical location of the

one or more data files...," is taught by Tobita at col. 5, lines 27-63.

12.   As per claims 6 and 7, the "...file location specifier comprises a file

allocation table...," is taught by Tobita at col. 5, lines 27-63 and col. 2, lines 5-12.

13.   Claims 10-14, 18, 29, and 32 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Tobita et al. (U.S. Patent No. 6,421,279) and Chen (U.S.

Patent No. 6,542,955).

14.   Tobita renders obvious independent claim 10 as follows:

"...a processor..." at col. 47, lines 26-29.

"...volatile memory operatively coupled to the processor..." at col. 4, lines 24-25 and col.

47, lines 26-29.

"...the volatile memory storing volatile data in at least one data file..." at col. 45, lines 66-

67, col. 46, lines 1-8 and col. 4, lines 34-37.

"...nonvolatile memory operatively coupled to the processor..." at col. 4, lines 24-25 and

col. 47, lines 26-29.

"...the nonvolatile memory storing nonvolatile data in at least one data file..." at col. 45,

lines 66-67, col. 46, lines 1-8 and col. 4, lines 34-37.

"...a memory region directory..." at col. 38, lines 19-38.

"...and a file location specifier to specify a physical location of the requested data file..."

at col. 5, lines 27-63.

"...within the volatile memory or the nonvolatile memory..." at col. 45, lines 66-67 and

col. 46, lines 1-8.

"...identified by the memory region directory as containing the requested data file..." at

col. 38, lines 19-38 and col. 7, lines 30-34.

Tobita does not teach identifying whether data is in volatile or non-volatile

memory.

15.   However, Chen teaches identifying whether data is in volatile or non-

volatile memory as follows:

"...to identify whether a requested data file is located in the volatile memory or in the

nonvolatile memory..." at col. 6, lines 16-19.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Chen with Tobita since Tobita and Chen teach the use of computers, the use

of volatile memory, the use of nonvolatile memory, the use of registers, and the use of

functions. Tobita provides a processor with both volatile and nonvolatile memory, a

memory region directory, and file location specifier and Chen provides a flag

distinguishing whether data is stored in volatile or non-volatile memory.

16.   As per independent claim 18, the "...means for handling a request for a

data file stored on the integrated circuit module...," is taught by Tobita at col. 7, lines 30-

34 and col. 6, lines 20-22,

the "...means for identifying whether the data file is located in volatile memory or

nonvolatile memory...," is taught by Chen at col. 6, lines 16-19,

and the "...and means for specifying a physical location of the data file within the volatile

memory or the nonvolatile memory...," is taught by Tobita at col. 5, lines 27-63.

17.   As per independent claim 29, the "...receiving a request for a data file stored on the IC module...," is taught by Tobita at col. 7, lines 3-15 and col. 6, lines 20-22,

the "...identifying...whether the data file is located in volatile memory or nonvolatile memory...," is taught by Chen at col. 6, lines 16-19,

the "...within the IC module...," is taught by Tobita at col. 6, lines 20-22,

and the "...and specifying a physical location of the data file within the volatile memory or the nonvolatile memory...," is taught by Tobita at col. 5, lines 27-63.

18.   As per claim 11, the "...data file stored in the volatile memory is destroyed when power is removed...," is taught by Tobita at col. 4, lines 26-29

and the "...from the IC module...," is taught by Tobita at col. 6, lines 20-22.

19.   As per claim 12, the "...memory region directory...," is taught by Tobita at col. 38, lines 19-38

and the "...is stored in the nonvolatile memory...," is taught by Tobita at col. 45, lines 66-67 and col. 46, lines 1-8.

20.   As per claim 13, the "...file location specifier comprises...," is taught by Tobita at col. 5, lines 27-63,

the "...first file allocation table to specify physical locations of data files within the volatile memory...," is taught by Tobita at col. 2, lines 5-12 and col. 5, lines 27-63.

the "...and a second file allocation table to specify physical locations of data files within the nonvolatile memory...," is taught by Tobita at col. 2, lines 5-12 and col. 5, lines 27-63.

21. As per claim 14, the "...the nonvolatile memory comprises both a read only memory and a read/write memory...," at col. 5, lines 27-63 and col. 37, lines 28-38, the "...and the file location specifier comprises...," is taught by Tobita at col. 5, lines 27-63,

the "...first table to specify physical locations of data files within the read only memory...," is taught by Tobita at col. 5, lines 27-63,

the "...second table to specify physical locations of data files within the read/write memory...," is taught by Tobita at col. 5, lines 27-63 and col. 37, lines 28-38,

the "...and a third table to specify physical locations of data files within the volatile memory...," is taught by Tobita at col. 5, lines 27-63.

22. As per claim 32, the "...perform the method as recited in claim 29...," is taught by Tobita at col. 5, lines 27-63, col. 6, lines 20-22, and col. 7, lines 3-15 and by Chen at col. 6, lines 16-19.

23. Claims 15, 16, 19, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobita and Chen as applied to the claims above, and further in view of Li.

As per claim 15, the "...to enable an application...," is taught by Tobita at col. 34, lines 14-16

and the "...to access the data files in the volatile memory and the nonvolatile memory...," is taught by Tobita at col. 7, lines 30-34, col. 45, lines 66-67, and col. 46, lines 1-8, but the "...application program interface...," is not taught by either Tobita or Chen.

However, Li teaches the use of application program interfaces as follows:

"...Within the system architecture 120 of FIG. 3, the API layer
125 or application program interface is shown as the top layer.
The API 125 is associated with a JVM 130. Generally, only one
application is resident for a particular JVM 130. The device
module 135 includes a file system which can use a mini disk, a
hard disk, flash ROM, a CD-ROM and/or a tape storage device..."
at col. 6, lines 31-37.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Li with Tobita and Chen since Tobita, Chen, and Li teach the use of

computers, the use of volatile memory, the use of nonvolatile memory, and the use of

functions, Tobita and Li teach the use of the use of tables, the use of files, the use of file

systems, and the use of applications, and Chen and Li teach the use of networks.

Tobita provides a processor with both volatile and nonvolatile memory, a memory region

directory, and file location specifier, Chen provides a flag distinguishing whether data is

stored in volatile or non-volatile memory, and Li provides the application program

interface.

24.   As per claim 16, the "...initialization mechanism...," is taught by Tobita at

col. 28, lines 41-43,

the "...to delete any data from the volatile memory...," is taught by Li at col. 9, lines 40-

42, col. 10, lines 55-59, and col. 5, lines 47-55,

the "...and to remove any reference to data files in the volatile memory...," is taught by Li

at col. 9, lines 40-42, col. 9, lines 28-29, col. 10, lines 55-59, and col. 5, lines 47-55,

and the "...from the memory region directory...," is taught by Tobita at col. 38, lines 19-

38.

25.   As per claims 19 and 31, the "...means for deleting all data files in the

volatile memory...," is taught by Li at col. 9, lines 40-42, col. 10, lines 55-59, and col. 5,

lines 47-55

and the "...and for removing any reference to the data files that might be stored in the

nonvolatile memory...," is taught by Li at col. 9, lines 40-42, col. 9, lines 28-29, col. 10,

lines 55-59, and col. 5, lines 47-55.

26.   As per claim 30, the "...exposing functions to manipulate the data files...,"

is taught by Li at col. 10, lines 31-39 and col. 5, lines 3-7,

the "...same functions being used...," is taught by Li at col. 10, lines 31-39,

and the "...regardless of whether the data files are located on the volatile memory or

the nonvolatile memory...," is taught by Tobita at col. 45, lines 66-67 and col. 46, lines 1-

8.

27.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Tobita as applied to claim 1 above, and further in view of Nobakht et al. (U.S. Patent

No. 6,587,873).

As per claim 12, the "...embodied as a smart card...," is not taught by Tobita.

However, Nobkht teaches the use of smart cards as follows:

```
"...CPU 210 and system controller 211 also support a smart card
access protocol..." at col. 6, lines 34-35.
```

It would have been obvious to one of ordinary skill at the time of the invention to

combine Nobkht with Tobita since Tobita and Nobkht teach the use of computers, the

use of volatile memory, the use of nonvolatile memory, the use of tables, the use of

files, the use of applications, the use of functions, and the use of integrated circuits.

Tobita provides a processor with both volatile and nonvolatile memory and a file system to manage the access of data and Nobkht provides the smart cards.

28.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tobita and Chen as applied to claim 10 above, and further in view of Nobakht.

As per claim 17, the "...embodied as a smart card...," is not taught by Tobita.

However, Nobkht teaches the use of smart cards as follows:

```
"...CPU 210 and system controller 211 also support a smart card
access protocol..." at col. 6, lines 34-35.
```

It would have been obvious to one of ordinary skill at the time of the invention to combine Nobkht with Tobita and Chen since Tobita, Chen, and Nobkht teach the use of computers, the use of volatile memory, and the use of nonvolatile memory, Tobita and Nobkht teach the use of the use of tables, the use of files, the use of applications, the use of functions, and the use of integrated circuits, and Chen and Nobkht teach the use of functions. Tobita provides a processor with both volatile and nonvolatile memory, a memory region directory, and file location specifier, Chen provides a flag distinguishing whether data is stored in volatile or non-volatile memory, and Nobkht provides the smart cards.

29.   Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobita et al. (U.S. Patent No. 6,421,279) and Li (U.S. Patent No. 6,519,594).

30.   Tobita renders obvious independent claim 20 by the following:

"...a file system to manage access to data files..." at col. 4, lines 58-60 and col. 31, lines 32-54.

"...stored in both volatile memory and nonvolatile memory..." at col. 45, lines 66-67 and

col. 46, lines 1-8.

"...to expose the file system to applications..." at col. 4, lines 58-60 and col. 6, lines 52-

55.

Tobita does not teach the use of application program interfaces.

31.   However, Li teaches the use of application program interfaces as follows:

"...and an application program interface (API)..." at col. 6, lines 31-37.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Li with Tobita since both Tobita and Li teach the use of computers, the use of

volatile memory, the use of nonvolatile memory, the use of tables, the use of files, the

use of file systems, the use of applications, and the use of functions. Tobita provides

both volatile and nonvolatile memory and a file system to manage the access of data

and Li provides the application program interface.

32.   As per claim 21, the "...API defines a function for opening a data file...," is

taught by Li at col. 6, lines 31-37 and col. 11, lines 14-20,

the "...function being used to open data files...," is taught by Li at col. 11, lines 14-20,

and the "...in the volatile memory and the nonvolatile memory...," is taught by Tobita at

col. 45, lines 66-67 and col. 46, lines 1-8.

33.   Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Tobita and Li as applied to claim 2 above, and further in view of Chen.

As per claim 22, the "...API defines a function...," is taught by Li at col. 6, lines

31-33 and col. 10, lines 31-39,

the "...the function including a parameter...," is taught by Li at col. 10, lines 31-39 and

col. 14, lines 4-6,

but the "...specifying whether a data file resides in the volatile memory or in the

nonvolatile memory...," is not taught by either Tobita or Li.

However, Chen teaches the use of a flag to distinguish between data stored in

volatile or non-volatile memory as follows:

"...The state of the NVMEN flag 242 determines whether a data
memory access is into the non-volatile memory 220' or volatile
memory (e.g., into of the internal data SRAM 230, SFR 240 or
external data SRAM 212)..." at col. 6, lines 16-19.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Chen with Tobita and Li since Tobita, Li, and Chen teach the use of

computers, the use of volatile memory, the use of nonvolatile memory, and the use of

functions and Li and Chen teach the use of networks. Tobita provides both volatile and

nonvolatile memory and a file system to manage the access of data, Li provides the

application program interface, and Chen provides a flag distinguishing whether data is

stored in volatile or non-volatile memory.

34.   As per claim 23, the "...a memory region directory...," is taught by Tobita at

col. 38, lines 19-38,

the "...to identify whether the individual data files are stored in the volatile memory or in

the nonvolatile memory...," is taught by Chen at col. 6, lines 16-19,

and the "...and a file location specifier to specify a physical location of the requested

data file within the volatile memory or the nonvolatile memory...," is taught by Tobita at

col. 5, lines 27-63.

35.   As per claim 24, the "...file location specifier comprises...," is taught by

Tobita at col. 5, lines 27-63,

the "...first file allocation table to specify physical locations of data files within

the volatile memory...," is taught by Tobita at col. 2, lines 5-12 and col. 5, lines 27-63.

the "...and a second file allocation table to specify physical locations of data files

within the nonvolatile memory...," is taught by Tobita at col. 2, lines 5-12 and col. 5, lines

27-63.

36.   Claims 25-27 and 39-42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Tobita et al. (U.S. Patent No. 6,421,279), Li (U.S. Patent No.

6,519,594), and Chen (U.S. Patent No. 6,542,955).

37.   Tobita renders obvious independent claim 25 by the following:

"...to access files stored in volatile memory and nonvolatile memory..." at col. 45, lines

66-67 and col. 46, lines 1-8.

"...and a memory region directory..." at col. 38, lines 19-38.

Tobita does not teach the use of application program interfaces and the

determination whether data is stored in volatile or non-volatile memory.

38.   However, Li teaches the use of application program interfaces as follows:

"...an application program interface to enable an application..." at col. 6, lines 31-33.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Li with Tobita since both Tobita and Li teach the use of computers, the use of

volatile memory, the use of nonvolatile memory, the use of tables, the use of files, the

use of file systems, the use of applications, and the use of functions. Tobita both volatile

and nonvolatile memory, the access of data, and the memory region directory and Li

provides the application program interface.

Li does not teach the determination whether data is stored in volatile or non-

volatile memory.

39.   However, Chen teaches the determination whether data is stored in

volatile or non-volatile memory as follows:

"...to identify whether a file is stored in the volatile memory or the nonvolatile memory..."

at col. 6, lines 16-19.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Chen with Tobita and Li since Tobita, Li, and Chen teach the use of

computers, the use of volatile memory, the use of nonvolatile memory, and the use of

functions and Li and Chen teach the use of networks. Tobita both volatile and

nonvolatile memory, the access of data, and the memory region directory, Li provides

the application program interface, and Chen provides a flag distinguishing whether data

is stored in volatile or non-volatile memory.

40.   As per independent claim 39, the "...storing volatile data in at least one

volatile data file in volatile memory...," is taught by Li at col. 5, lines 47-55,

the "...storing nonvolatile data in at least one nonvolatile data file in nonvolatile

memory...," is taught by Li at col. 5, lines 47-55,

the "...receiving a request to access a particular data file...," is taught by Tobita at col. 7,

lines 3-15,

the "...determining whether the particular data file is stored in the volatile memory or the nonvolatile memory...," is taught by Chen at col. 6, lines 16-19,

and the "...and locating the particular data file...," is taught by Tobita at col. 46, lines 59-66.

41.   As per claim 26, the "...file location specifier to specify a physical location of the file within the volatile memory or the nonvolatile memory...," is taught by Tobita at col. 5, lines 27-63.

42.   As per claim 27, the "...first file allocation table to specify physical locations of data files within the volatile memory...," is taught by Tobita at col. 2, lines 5-12 and col. 5, lines 27-63

and the "...and a second file allocation table to specify physical locations of data files within the nonvolatile memory...," is taught by Tobita at col. 2, lines 5-12 and col. 5, lines 27-63.

43.   As per claim 40, the "...using a file allocation table to locate the particular data file...," is taught by Tobita at col. 2, lines 5-12 and col. 46, lines 59-66.

44.   As per claim 41, the "...exposing a common set of functions...," is taught by Li at col. 11, lines 50-51 and col. 10, lines 31-39,

and the "...to manipulate both the volatile data files and the nonvolatile data files...," is taught by li at col. 5, lines 3-7 and col. 5, lines 47-55.

45.   As per claim 42, the "...perform the method as recited in claim 39...," is taught by is taught by Tobita at col. 7, lines 3-15 and col. 46, lines 59-66, by Li at col. 5, lines 47-55, and by Chen at col. 6, lines 16-19.

46. Claims 28, 33, 34, 37, 38, and 43 rejected under 35 U.S.C. 103(a) as being unpatentable over Tobita et al. (U.S. Patent No. 6,421,279), Li (U.S. Patent No. 6,519,594), and Nobakht et al. (U.S. Patent No. 6,587,873).

47. Tobita renders obvious independent claim 28 by the following: "...and facilitate access to the volatile data file by one or more applications..." at col. 7, lines 30-34 and col. 6, lines 52-54.

Tobita does not teach the storing of data in volatile memory and the use of a smart card.

48. However, Li teaches the storing of data in volatile memory as follows: "...store data in a volatile data file within volatile memory..." at col. 5, lines 47-55.

It would have been obvious to one of ordinary skill at the time of the invention to combine Li with Tobita since both Tobita and Li teach the use of computers, the use of volatile memory, the use of nonvolatile memory, the use of tables, the use of files, the use of file systems, the use of applications, and the use of functions. Tobita provides access to volatile memory from applications and Li provides the storing of volatile data.

Li does not teach the use of smart cards.

49. However, Nobakht teaches the use of smart cards as follows: "...of the smart card..." at col. 6, lines 34-35.

It would have been obvious to one of ordinary skill at the time of the invention to combine Nobakht with Tobita and Li since Tobita, Li, and Nobakht teach the use of computers, the use of volatile memory, the use of nonvolatile memory, the use of tables, the use of files, the use of applications, and the use of functions, Tobita and Nobakht

teach the use of integrated circuits, and Li and Nobakht teach the use of networks,

application program interfaces, and operating systems. Tobita provides access to

volatile from applications, Li provides the storing of volatile data, and Nobakht provides

the smart card.

50.   As per independent claim 33, the "...storing data in a volatile data file in

volatile memory...," is taught by Li at col. 5, lines 47-55,

the "...of an integrated circuit module...," is taught by Tobita at col. 6, lines 20-22,

the "...receiving, from a requestor, a request to access the volatile data file...," is taught

by Tobita at col. 7, lines 3-5, col. 45, lines 66-67, and col. 46, lines 1-8,

the "...on the integrated circuit module...," is taught by Tobita at col. 6, lines 20-22,

the "...evaluating whether the requestor is authorized...," is taught by Nobakht at col. 8,

lines 39-41,

the "...to access the volatile data file...," is taught by Tobita at col. 31, lines 32-35, col.

45, lines 66-67, and col. 46, lines 1-8,

the "...and in an event that the requestor is authorized...," is taught by Nobakht at col. 8,

lines 39-41,

and the "...locating the volatile data file in the volatile memory...," is taught by Tobita at

col. 46, lines 59-66, col. 45, lines 66-67, and col. 46, lines 1-8.

51.   As per independent claim 43, the "...storing data produced by a first

application within a volatile data file within volatile memory...," is taught by Li at col. 5,

lines 47-55 and col. 5, lines 35-36,

the "...in a smart card...," is taught by Nobakht at col. 6, lines 34-35,

and the "...and accessing the volatile data file from a second application...," is taught by

Tobita at col. 7, lines 30-34, col. 45, lines 66-67, col. 46, lines 1-8, and col. 6, lines 52-

55.

52.   As per claim 34, the "...data stored in the volatile data file is produced by a

first application...," is taught by Li at col. 5, lines 47-55 and col. 6, lines 35-36

and the "...requestor is a second application...," is taught by Nobakht at col. 8, lines 39-

41 and col. 7, lines 35-39.

53.   As per claim 37, the "...returning a handle to the volatile data file...," is

taught by Tobita at col. 24, lines 1-6, col. 45, lines 66-67, and col. 46, lines 1-8.

54.   As per claim 38, the "...perform the method as recited in claim 33...," is

taught by Tobita at col. 6, lines 20-22, col. 7, lines 3-5, col. 31, lines 32-35, col. 45, lines

66-67, and col. 46, lines 1-8, and col. 46, lines 59-66, by Li at col. 5, lines 47-55, and by

Nobakht at col. 8, lines 39-41.

55.   Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Tobita, Li, and Nobakht, and further in view of Chen.

As per claim 35, the "...and specifying a physical location of the volatile data file

within the volatile memory...," is taught by Tobita at col. 5, lines 27-63,

but the "...ascertaining that the volatile data file is located in the volatile memory...," is

not taught by either Tobita, Li, or Nobakht.

However, Chen teaches the use of a flag to distinguish between data stored in

volatile or non-volatile memory as follows:

"...The state of the NVMEN flag 242 determines whether a data
memory access is into the non-volatile memory 220' or volatile

memory (e.g., into of the internal data SRAM 230, SFR 240 or external data SRAM 212)..." at col. 6, lines 16-19.

It would have been obvious to one of ordinary skill at the time of the invention to combine Chen with Tobita, Li, and Nobakht since Tobita, Li, Nobakht, and Chen teach the use of computers, the use of volatile memory, the use of nonvolatile memory, and the use of functions, Tobita, Li, Nobakht, and Chen teach the use of registers, and Li, Nobakht, and Chen teach the use of networks. Tobita provides receiving requests to access to volatile memory and integrated circuit modules, Li provides storing data in volatile memory, Nobakht provides for authorization of requesters, and Chen provides a flag distinguishing whether data is stored in volatile or non-volatile memory.

56.   As per claim 36, the "...passing in a parameter...," is taught by Li at col. 14, lines 4-6

and the "...that identifies the volatile data file as being stored in the volatile memory...," is taught by Chen at col. 6, lines 16-19.

57.   As per claim 44, the "...evaluating whether the second application is authorized...," is taught by Nobakht at col. 7, lines 35-39 and col. 8, lines 39-41

and the "...to access the volatile data file...," is taught by Tobita at col. 7, lines 30-34, col. 45, lines 66-67, and col. 48, lines 1-8.

58.   As per claim 45, the "...perform the method as recited in claim 43...," is taught by Tobita at col. 6, lines 52-55, col. 7, lines 30-34, col. 45, lines 66-67, and col. 46, lines 1-8, by Li at col. 5, lines 35-36 and col. 5, lines 47-55, and by Nobakht at col. 6, lines 34-35.
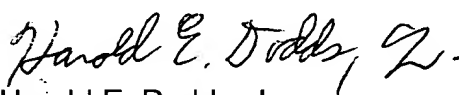
Conclusion

59.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Harold E. Dodds, Jr. whose telephone number is

(703)-305-1802. The examiner can normally be reached on Monday - Friday 8:00 -

4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John E. Breene can be reached on (703)-305-9790. The fax phone number

for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703)-

305-3900.

Harold E. Dodds, Jr.
Patent Examiner
October 16, 2003

GRETA ROBINSON
PRIMARY EXAMINER